REMARKS

Claims 1, 3, 8-47 and 49-58 are under the examination. Claims 43-47, 53 and 54 are free of prior art. Claims 46, 47, 53 and 54 are rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the enablement requirement. Claims 3, 11-15, 19-23, 27-29, 33-35, 39-45, 50-52 and 55-58 are rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the written description requirement. Claims 3, 11-15, 19-23, 27-29, 33-35, 39-47 and 50-58 are rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the enablement requirement. Claims 1, 3 and 49-51 are rejected under 35 U.S.C. § 102(a) as being allegedly anticipated by Xu *et al.* (2001, *Plant Molecular Biology* 47:727-738; hereafter "*Xu*"). Claims 3, 11, 12, 19, 20, 33, 34, 39, 40, 49-51, 55 and 56 are rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by Anderson *et al.* (U.S. Patent No. 6,031,087; hereafter "*Anderson*"). Claims 3, 50 and 55 are rejected under 35 U.S.C. § 102(b) as being anticipated by Alcala *et al.* (2001, GenBank Accession No. AW035333; hereafter "*Alcala*"). Claims 3, 11, 12, 14, 15, 19, 20, 22, 23, 27, 28, 33, 34, 39, 40, 42, 50-52 and 55-58 are rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by Johnson *et al.* (1989, *Proc. Natl. Acad. Sci. USA* 86:9871-9875; hereafter "*Johnson*") taken with Graham *et al.* (1985, *J. Biol. Chem.* 260:6561-6564). Claims 1, 3, 8, 9, 11, 12, 14-17, 19, 20, 30, 31, 33, 34, 36, 37, 39, 40, 42, 49-52 and 55-58 are rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over *Johnson* in view of *Xu*. Claims 1, 3, 8, 10, 11, 13, 16, 18, 19, 21, 30, 32, 33, 35, 36, 38, 39, 41, 49-52, 55 and 56 are rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over *Xu* in view of Daniell *et al.* (U.S. Patent Application Publication No. 2004/0210966; hereafter "*Daniell*") and further in view of Zhang *et al.* (2001, *Plant Physiology* 127:131-141, abstract; hereafter "*Zhang*"). Claims 1, 3, 16, 17, 19, 20, 22 and 23 are rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Solomon *et al.* (1999, *Plant Cell* 11:431-443; hereafter "*Solomon*") in view of *Xu*. Claims 1, 3, 24, 25, 27 and 28 are rejected

under 35 U.S.C. § 103(a) as being allegedly unpatentable over Urwin *et al.* (1998, *Planta* 204:472-479; hereafter "*Urwin*") in view of *Xu*.

The specification is herein amended to include the sequence identifiers. A substitute Sequence Listing incorporating the amendment is concurrently submitted herewith. Claims 8, 11, 16, 19, 22, 24, 27, 30, 33, 39, 42, 51 and 55 are herein amended. Claims 3, 12, 13, 20, 21, 28, 29, 34, 35, 40, 41 and 50 are herein cancelled without prejudice. No new matter has been introduced.

Reconsideration of the present application in view of the foregoing amendments and the remarks below is respectfully requested.

Claim Rejections under 35 U.S.C. § 112

(1) Claims 46, 47, 53 and 54 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement.

Claim 46 is directed to a transgenic lettuce comprising cells that comprise plasmid vector pSa7 and claim 53 is directed to recombinant vector pSa7 itself. Claim 47 is directed to a transgenic tobacco comprising cells that comprise plasmid vector pMLVHisP and claim 54 is directed to recombinant vector pMLVHisP itself.

Applicants respectfully submit that the plasmid vectors, pSa7 and pMLVHisA, were deposited with China Center for Type Culture Collection (CCTCC) under the Budapest Treaty on June 9, 2005 and July 25, 2005, respectively, and were accorded accession nos. CCTCC M 205062 and CCTCC M 205084, respectively. Copies of the certificates issued by the CCTCC in connection with the deposits and the statement under 37 C.F.R. § 1.804(b) are being submitted concurrently herewith. The specification is herein amended accordingly pursuant to 37 C.F.R. § 1.809(d).

Applicants believe the deposits of the plasmid vectors recited in the rejected claims satisfy the enablement requirement under 35 U.S.C. § 112, first paragraph. Accordingly, the rejection of claims 46, 47, 53 and 54 under 35 U.S.C. § 112, first paragraph, should be withdrawn.

(2) Claims 3, 11-15, 19-23, 27-29, 33-35, 39-45, 50-52 and 55-58 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.

Specifically, the Office Action states, among others, that "there is no functional description of an isolated nucleic acid molecule having a nucleotide sequence that hybridizes to SEQ ID NO:1" and that "applicant does not describe the sufficient structural elements of a representative number of nucleic acids that encode a proteinase inhibitor II."

Applicants respectfully traverse the rejection.

As discussed in the previous Amendment filed Jun 10, 2005, the structural features of SEQ ID NO:1 that are essential for its function are described in the present specification at page 9, lines 1-15. SaPIN2a encoded by SEQ ID NO:1 contain an inhibitory domain 1 and an inhibitory domain 2 which correspond to a trypsin-inhibitory domain and a chymotrypsin-inhibitory domain. The trypsin-inhibitory domain corresponds to amino acids 30-83 of the amino acid sequence encoded by SEQ ID NO:1 and the chymotrypsin-inhibitory domain corresponds to amino acids 87-140 of the amino acid sequence encoded by SEQ ID NO:1. Thus, the structure and function of SEQ ID NO:1 is clearly defined and so as the sequence of its complement.

The Office Action states that "[t]he structure of SEQ ID NO:1 is not the issue, as the full length of the sequence is described."

Applicants respectfully disagree with the statement.

On the contrary to the statement above, the structure of SEQ ID NO:1 ***is*** the important element of the claims as discussed below.

The present claims are directed to a genus of nucleic acids all of which hybridize with SEQ ID NO:1 and encode a protein having proteinase inhibitor II activity. The hybridization techniques using a known DNA as a probe under highly stringent conditions are conventional and well known in the art as evidenced by the descriptions at pp. 8.46-8.49 in *Molecular Cloning: A Laboratory Manual, 2nd Ed.*, by Sambrook *et al.* (1989, Cold Spring Harbor Laboratory Press, Cold Spring Harbor, N.Y.). A copy of Chapter 8 entitled "Construction and Analysis of cDNA Libraries" of the book is submitted herewith as a part of the Information Disclosure Statement.

Based on the skill and knowledge of the techniques in the art, one skilled in the art would ***not*** expect substantial variation among species encompassed by the scope of the rejected claims because it is well known that the highly stringent hybridization conditions as recited in claims 3, 11, 19, 27, 33, 39 and 50 would yield ***structurally similar DNAs***. In fact, SaPIN2a (SEQ ID NO:1) and SaPIN2b (SEQ ID NO:3) themselves of the present invention, *i.e.*, proteinase inhibitor II genes, were isolated by screening a *Solanum americanum* cDNA library using a tomato proteinase inhibitor II cDNA ***as a hybridization probe*** (*see* page 3, lines 18-24, of the present invention). And SEQ ID NO:1 does indeed hybridize under the stringent conditions to the complement of a proteinase inhibitor II nucleotide sequence of SEQ ID NO:1. Thus, a sufficient number of representative species is disclosed in the present specification, and the highly stringent hybridization conditions in combination with the structural characteristics of SEQ ID NO:1 and the level of skill and knowledge in the art are adequate to determine that Applicants were in possession of the claimed invention.

Claims 11, 19, 27, 33 and 39 are herein amended to read, in the relevant portion, "wherein the nucleotide sequence encodes a protein having proteinase inhibitor II activity", for clarification purposes. Claim 22 is herein amended to correct a clerical error and to depend from any of claim 16 or 19. Claim 42 is herein amended to adjust its dependency. Claims 51 and 55 are herein amended to depend from claim 49. Claims 3, 12, 13, 20, 21, 28, 29, 34, 35, 40, 41 and 50 are herein cancelled without prejudice to solely accelerate the prosecution of the present application.

Accordingly, Applicants respectfully request that the rejection of claims 11, 14, 15, 19, 22, 23, 27, 33, 39, 42-45, 51, 52 and 55-58 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement, be withdrawn.

(3) Claims 3, 11-15, 19-23, 27-29, 33-35, 39-47 and 50-58 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement.

Specifically, the Office Action states that the instant specification "fails to provide guidance for where to find proteinase-inhibitor encoding nucleic acids that hybridize to SEQ ID NO:1" and further that the instant specification "fails to provide guidance for which amino acids of SEQ ID NO:2 can be altered and to which other amino acids, and which amino acids must not be changed, to maintain proteinase-inhibitor activity of the encoded protein." The Examiner calculates the number of all possible single amino acid substitution in a protein encoded by SEQ ID NO:1 and concludes that "making and analyzing proteins with many amino acid substitutions that also have hypersensitive response elicitor activity would require undue experimentation" and "[t]herefore, it would require undue experimentation to make and/or use the invention as broadly claimed."

Applicants respectfully traverse the rejection and disagree with the statement.

Claims 46 and 47 are discussed in the previous section.

"[A]n examiner may reject a claim if it is reasonable to conclude that one skilled in the art would be unable to carry out the claimed invention." *In re Buchner*, 929 F.2d 660, 18 USPQ2d 1331 (Fed. Cir. 1991).

The Examiner's attention is respectfully directed to the descriptions at page 21, line 11 through page 22, line 11. The nucleic acid molecule having a nucleotide sequence that hybridizes to the complement of SEQ ID NO:1 can be found, for example, by screening a cDNA or genomic DNA library (for example, libraries from many *Solanaceae* plants, including tomato, potato and tobacco; *see* page 2, lines 8-11 of the present specification) with a nucleotide fragment specific for a part of the proteinase inhibitor II, in particular, SEQ ID NO:1. Such a technique is well known in the art (*e.g.*, *see* Sambrook *et al.*, 1989, Molecular Cloning: A Laboratory Manual, Cold Spring Harbor Laboratory Press, Cold Spring Harbor, N.Y., and U.S. Patent No. 5,650,148; a copy of the relevant portion of the book is submitted herewith for the Examiner's reference as a part of the Information Disclosure Statement; *also see* the a copy of the instruction manual of Hybond-N, nylon membranes optimized for nucleic acid transfer by Amersham Biosciences, which is also submitted herewith as a part of the Information Disclosure Statement). Or, a set of degenerate oligonucleotides specific for the proteinase inhibitory domains can be prepared based on the amino acid sequences of the domains and used as primers, which hybridize to relevant sequences under the stringent conditions, for PCR. The methods for expressing thus-isolated nucleic acid molecules are described in detail in Sections 5.1 and 5.3-5.8 of the present specification and the method for detecting trypsin and chymotrypsin inhibitory activity is described at page 42 of the specification.

Thus, the present specification provides sufficient information so that one skilled in the art would ***be able to carry out the claimed invention***, and that is all required by the enablement requirement under 35 U.S.C. § 112, first paragraph. The provision does not require that the specification should provide all possible approaches

to enable the invention and then prove or disprove that some are enabling and some are not.

Thus, Applicants believe that the present specification is fully enabling for the claimed subjects matter. Claims 3, 12, 13, 20, 21, 28, 29, 34, 35, 40, 41 and 50 are herein cancelled without prejudice as explained in the previous section and, therefore, the rejections of these claims are now moot. Claims 11, 19, 22, 27, 33, 39, 51 and 55 are herein amended as described in the previous section.

Accordingly, Applicants request that the rejections of claims 11, 14, 15, 19, 22, 23, 27, 33, 39, 42-47, and 51-58 under 35 U.S.C. § 112, first paragraph, as lacking enablement be withdrawn.

Claim Rejections under 35 U.S.C. § 102

(1) Claims 1, 3 and 49-51 are rejected under 35 U.S.C. § 102(a) as being anticipated by *Xu*.

Specifically, the Office Action states that "*Xu* teaches a nucleotide sequence comprising SEQ ID NO:1 and said sequence cloned in a vector having regulatory elements" (internal citations omitted).

Applicants respectfully submit that the *Xu* publication was published in December 2001 by two of the present inventors, *i.e.*, Zeng-Fu Xu and Mee-Len Chye, in addition to three other co-authors who are not the inventors of the present invention. Applicants attach hereto a Declaration executed by non-inventors who co-authored the *Xu* publication, stating that they are not the inventors of the subject matter disclosed in the present application and that Mee Len Chye, Zeng-Fu Xu and Suk-Fong Sin are the only inventors of the subject matter of the present application.

Thus, *Xu* was published by the inventors themselves and, therefore, is not qualified as prior art against the present application under 35 U.S.C. § 102(a). Furthermore, since *Xu* was published in December 2001, which is within one (1) year of the earliest filing date of the present application (*i.e.*, November 29, 2002), it is also not qualified as prior art against the present application under 35 U.S.C. § 102(b) either.

Claims 3 and 50 are herein cancelled without prejudice. Claim 51 is herein amended as described in the previous section.

Accordingly, Applicants respectfully request that the rejection of claims 1, 49 and 51 under 35 U.S.C. § 102(a) as being anticipated by *Xu* be withdrawn.

(2) Claims 3, 11, 12, 19, 20, 33, 34, 39, 40, 49, 51, 55 and 56 are rejected under 35 U.S.C. § 102(b) as being anticipated by *Anderson*.

Specifically, the Office Action states that *Anderson* "discloses a nucleotide sequence that hybridizes to SEQ ID NO:1 because the former has 67.3% similarity to the latter" and that "there are long stretches of the Anderson sequence that have much higher than 67.3% identity; these would hybridize to SEQ ID NO:1 under the recited conditions."

Claims 3, 12, 20, 34 and 40 are herein cancelled without prejudice.

Claims 11, 19, 33 and 39 are herein amended to indicate that the transforming of the plant is by plastid transformation. *Anderson* does not teach or even suggest a transformation of a plant by plastid transformation. Furthermore, *Anderson* does not disclose a polynucleotide that either comprises the nucleotide sequence of SEQ ID NO:1 or encodes the amino acid sequence of SEQ ID NO:2 at all and, therefore, *Anderson* does not teach or even suggest the recombinant vector as recited in claim 49 either.

Claims 51 and 55 are herein amended to depend from claim 49.

Thus, claims 11, 19, 33, 39, 49, 51, 55 and 56 are not anticipated by *Anderson*. Accordingly, Applicants respectfully request that the claim rejection under 35 U.S.C. § 102(b) as being anticipated by *Anderson* be withdrawn.

(3) Claims 3, 50 and 55 are rejected under 35 U.S.C. § 102(b) as being anticipated by *Alcala* (GenBank Accession No. AW035333).

Specifically, the Office Action states that *Alcala* "teaches a proteinase-inhibitor encoding nucleic acid that would hybridize to SEQ ID NO:1 because the former has 79.4% identity to SEQ ID NO:1 and has long stretches of even higher identity" and that "[t]he nucleic acid is in a vector because it was isolated form a library, and the vector would inherently be in recombinant cell."

Claims 3 and 50 are herein cancelled without prejudice and the rejection of these claims is now moot. Claim 55 is herein amended to depend from claim 49.

Accordingly, the claim rejection under 35 U.S.C. § 102(b) as being anticipated by *Alcala* should be withdrawn.

(4) Claims 3, 11, 12, 14, 15, 19, 20, 22, 23, 27, 28, 33, 34, 39, 40, 42, 50-52 and 55-58 are rejected under 35 U.S.C. § 102(b) as being anticipated by *Johnson* taken with *Graham*.

Specifically, the Office Action states that *Johnson* "teaches tobacco plants nuclearly transformed with vectors comprising a 35S promoter operatively linked to the TI-II nucleic acid and methods of producing the protein and isolating it from the plants." And since *Graham* "teaches the TI-II nucleic acid, which is a proteinase-inhibitor encoding nucleic acid that would hybridize to SEQ ID NO:1 because it has a 35

nucleotide long stretch of 100% identity," *Johnson* inherently anticipates the present claims.

Claims 3, 12, 20, 28, 34, 40 and 50 are herein cancelled without prejudice.

Claims 11, 19, 27, 33 and 39 are herein amended to indicate that the transforming of the plant is by plastid transformation. Neither *Johnson* nor *Graham* teaches or even suggests a transformation of a plant by plastid transformation. Claims 22, 42, 51 and 55 are herein amended as described in the previous section.

Accordingly, the rejection of claims 11, 14, 15, 19, 22, 23, 27, 33, 39, 42, 51, 52 and 55-58 under 35 U.S.C. § 102(b) as being anticipated by *Johnson* taken with *Graham* should be withdrawn.

Claim Rejections under 35 U.S.C. § 103

(1) Claims 1, 3, 8, 9, 11, 12, 14-17, 19, 20, 30, 31, 33, 34, 36, 37, 39, 40, 42, 49-52 and 55-58 are rejected under 35 U.S.C. § 102(a) as being unpatentable over *Johnson* in view of *Xu*.

Specifically, the Office Action states that *Johnson* discloses plant transformation plasmids containing either proteinase innibitor I or II coding regions, under the control of the CaMV 35S promoter. And, the Office Action goes on to state that, although *Johnson* does not teach a nucleic acid of SEQ ID NO:1, *Xu* teaches a polynucleotide that comprises the nucleotide SEQ ID NO:1 or an isolated nucleic acid molecule having a nucleotide sequence that hybridizes to a proteinase inhibitor II nucleotide sequence of SEQ ID NO:1 and, therefore, the claimed invention would have been prima facie obvious as a whole to one of ordinary skill in the art.

As discussed in the previous section, *Xu* is not proper prior art under 35 U.S.C. § 102(a) or §102(b).

Claims 3, 12, 20, 34, 40 and 50 are herein cancelled without prejudice.

As the Office Action acknowledges, *Johnson* does not teach or even suggest at all a nucleic acid having the nucleotide sequence of SEQ ID NO:1. Thus, *Johnson* does not teach or even suggest the present invention as recited in claims 1, 8, 9, 14-17, 30, 31, 36, 37, 42, 49, 51, 52 and 55-58 either.

Claims 11, 19, 33 and 39 are herein amended to indicate that the transforming of the plant is by plastid transformation. *Johnson* does not teach or even suggest anything about transforming of a plant by plastid transformation.

Claims 42, 51 and 55 are herein amended as described in the previous section. 3, 12, 20, 34, 40 and 50

Thus, claims 1, 8, 9, 11, 14-17, 19, 30, 31, 33, 36, 37, 39, 42, 49, 51, 52 and 55-58 are not obvious at all over *Johnson* alone and, therefore, the rejection of the claims under 35 U.S.C. § 103(a) as being unpatentable over *Johnson* in view of *Xu* should be withdrawn.

(2) Claims 1, 3, 8, 10, 11, 13, 16, 18, 19, 21, 30, 32, 33, 35, 36, 38, 39, 41, 49-52, 55 and 56 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Xu* in view of *Daniell* and further in view of *Zhang*.

As discussed above, *Xu* is not a proper prior art reference against the present invention.

As the Office Action acknowledges, neither *Daniell* nor *Zhang* teaches or even suggests plants transformed with SEQ ID NO:1, either alone or in combination.

Claims 3 and 50 are herein cancelled without prejudice.

None of the claims is obvious over *Daniell* or *Zhang*, each alone or in combination. Accordingly, the claim rejection under 35 U.S.C. § 103(a) as being unpatentable over *Xu* in view of *Daniell* and further in view of *Zhang* should be withdrawn.

(3) Claims 1, 3, 16, 17, 19, 20, 22 and 23 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Solomon* in view of *Xu*.

As discussed above, *Xu* is not a proper prior art reference against the present invention.

Claims 3 and 20 are herein cancelled without prejudice.

As the Office Action acknowledges *Solomon* does not teach or even suggest a method for inhibiting programmed cell death and senescence in a transformed plant or plant part using a recombinant vector comprising a SEQ ID NO:1.

Thus, the present claims are not obvious over *Solomon* alone and the rejection of claims 1, 16, 17, 19, 20, 22 and 23 under 35 U.S.C. § 103(a) should be withdrawn.

(4) Claims 1, 3, 24, 25, 27 and 28 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Urwin* in view of *Xu*.

Claims 3 and 28 are herein cancelled without prejudice.

As the Office Action acknowledges, *Urwin* does not teach or even suggest transformed plants comprising SEQ ID NO:1 or a nucleic acid molecule having a nucleotide sequence of SEQ ID NO:1.

Since *Xu* is not a proper prior art reference against the present invention as discussed above, the claim rejection under 35 U.S.C. § 103(a) as being unpatentable over *Urwin* in view of *Xu* should be withdrawn.

In view of the above amendments, applicants believe the pending application is in condition for allowance, early notification of which is earnestly requested.

No fee is believed to be due for this submission. Should any fee(s) be required, please charge such fee(s) to Deposit Account No. 50-2215.

Dated: December 14, 2005

Respectfully submitted,

By _____

Charles E. Miller
Registration No.: 24,576
DICKSTEIN SHAPIRO MORIN & OSHINSKY LLP
1177 Avenue of the Americas
New York, New York 10036-2714
(212) 835-1400
Attorney for Applicants

Attachments:
Sequence Listing in paper form and in CRF;
Statement under 37 C.F.R. §§ 1.821-1.825;
Statement under 37 C.F.R. §§ 1.804(b) with copies of Certificates issued by China Center for Type Culture Collection; and
Declarations by Non-Inventors.

Docket No.: V9661.0043

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Application of: Mee Len Chye et al.

Application No.: 10/725,829 | Confirmation No.: 7267

Filed: December 1, 2003 | Art Unit: 1638

For: GENETICALLY MODIFIED PLANTS EXPRESSING PROTEINASE INHIBITORS, SAPIN2A OR SAPIN2B, AND METHODS OF USE THEREOF FOR THE INHIBITION OF TRYPSIN-AND CHYMOTRYPSIN-LIKE ACTIVITIES

Examiner: A. R. Kubelik

New York, NY
December 14, 2005

STATEMENT UNDER 37 C.F.R. § 1.804(b)

U.S. Patent and Trademark Office
220 20th Street S.
Customer Window
Crystal Plaza Two, Lobby, Room 1B03
Arlington, VA 22202

Dear Sir:

The undersigned hereby states that the plasmid vectors, pSa7 and pMLVHisA, were deposited with China Center for Type Culture Collection (CCTCC) under the Budapest Treaty on June 9, 2005 and July 25, 2005, respectively, and were accorded accession nos. CCTCC M 205062 and CCTCC M 205084, respectively. Copies of the certificates issued by the CCTCC in connection with the deposits are attached hereto. The undersigned further states that the deposited materials are

biological materials specifically identified as pSa7 and pMLVHisA, respectively, in the above-identified application as filed.

Dated: December 14, 2005

Respectfully submitted,

By_____

Charles E. Miller
Registration No.: 24,576
DICKSTEIN SHAPIRO MORIN &
OSHINSKY LLP
1177 Avenue of the Americas
New York, New York 10036-2714
(212) 835-1400
Attorney for Applicant

IY/CEM/mgs

Attachments

CHINA CENTER FOR TYPE CULTURE COLLECTION

Wuhan University, Wuhan 430072 P. R. China Fax (027) 68754833, E-mail: cctcc@whu.edu.cn

BUDAPEST TREATY ON THE INTERNATIONAL RECOGNITION OF THE DEPOSIT OF MICROORGANISMS FOR THE PURPOSES OF PATENT PROCEDURE

To: (Name and Address of Depositor or Attorney)
China Patent Agent, The University of Hong Kong
Deposited on Behalf of:
Mee-Len Chye, Department of Botany, The University of Hong Kong, Hong Kong
Identification Reference by Depositor: CCTCC Designation:
pSa7 CCTCC M 205062

The deposit was accompanied by:_____a scientific description,__X__a proposed taxonomic description indicated above.

The deposit was received on June 9, 2005 by this International Depository Authority and have been accepted.

AT YOUR REQUEST:

We will inform you of requests for the strain for 30 years.

The strain will be made available if a patent office signatory to the Budapest Treaty certifies one's right to receive.

If the culture should die or be destroyed during the effective term of the deposit, it shall be your responsibility to replace it with living culture of the same.

The strain will be maintained for a period of at least 30 years after the date of deposit, and for a period of at least five years after the most recent request for a sample.

The viability of the culture cited above was tested on June 23, 2005. On that date, the culture was viable.

International Depository Authority: China Center for Type Culture Collection (CCTCC).

Signature of person having authority to represent CCTCC:

Chengxiang Fang Date: September 2, 2005

Chengxiang Fang, Deputy Director of CCTCC

CHINA CENTER FOR TYPE CULTURE COLLECTION

Wuhan University, Wuhan 430072 P. R. China Fax (027) 68754833, E-mail: cctcc@whu.edu.cn

BUDAPEST TREATY ON THE INTERNATIONAL RECOGNITION OF THE DEPOSIT OF MICROORGANISMS FOR THE PURPOSES OF PATENT PROCEDURE

To: (Name and Address of Depositor or Attorney)
China Patent Agent, The University of Hong Kong
Deposited on Behalf of:
Mee-Len Chye, Department of Botany, The University of Hong Kong, Hong Kong
Identification Reference by Depositor:
pMLV HisA

CCTCC Designation:
CCTCC M 205084

The deposit was accompanied by:____a scientific description,__X__a proposed taxonomic description indicated above.

The deposit was received on July 25, 2005 by this International Depository Authority and have been accepted.

AT YOUR REQUEST:

We will inform you of requests for the strain for 30 years.

The strain will be made available if a patent office signatory to the Budapest Treaty certifies one's right to receive.

If the culture should die or be destroyed during the effective term of the deposit, it shall be your responsibility to replace it with living culture of the same.

The strain will be maintained for a period of at least 30 years after the date of deposit, and for a period of at least five years after the most recent request for a sample.

The viability of the culture cited above was tested on August 10, 2005. On that date, the culture was viable.

International Depository Authority: China Center for Type Culture Collection (CCTCC).

Signature of person having authority to represent CCTCC:

Chengxiang Fang Date: September 2, 2005

Chengxiang Fang, Deputy Director of CCTCC